

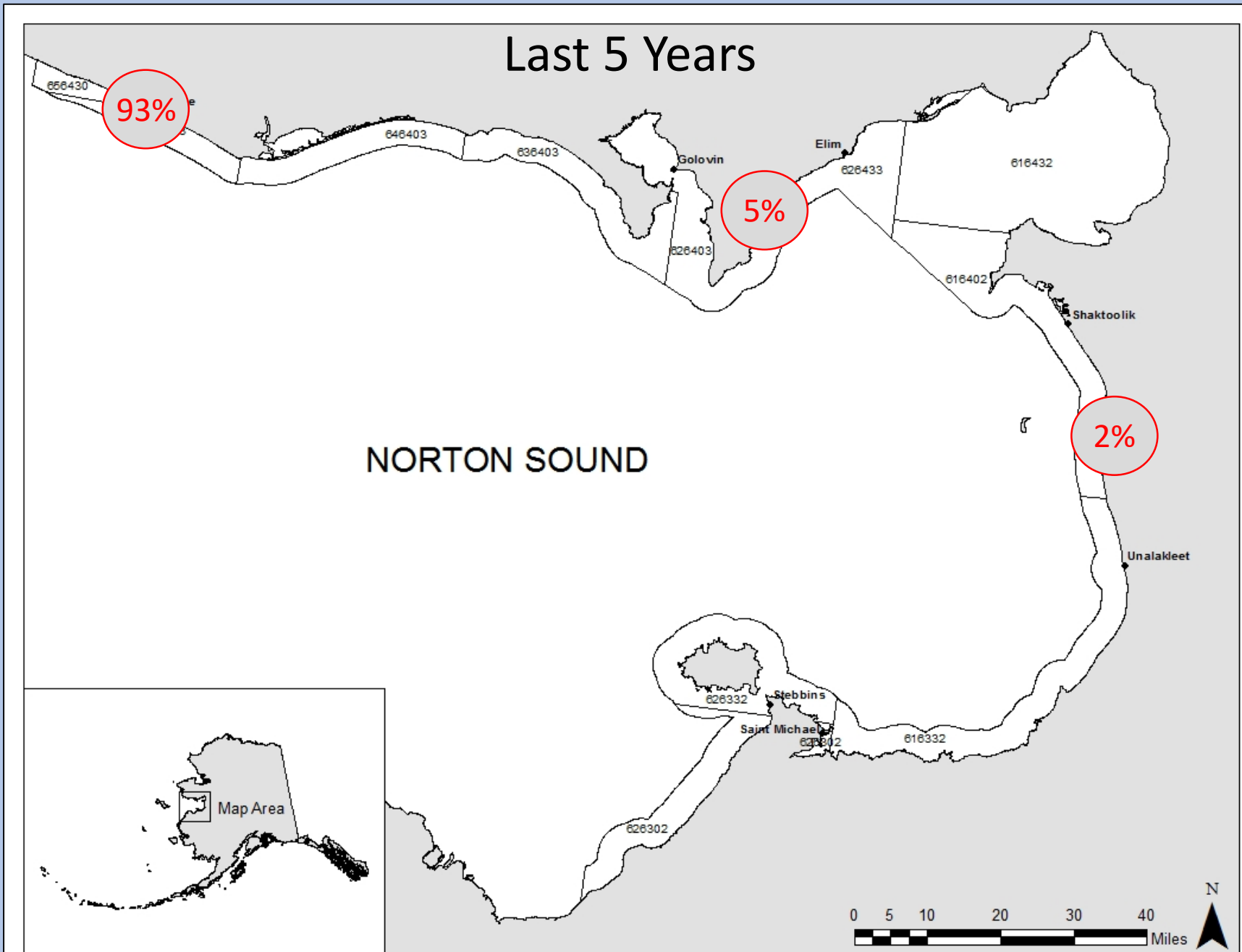
Norton Sound Red King Crab Fishery

Justin Leon

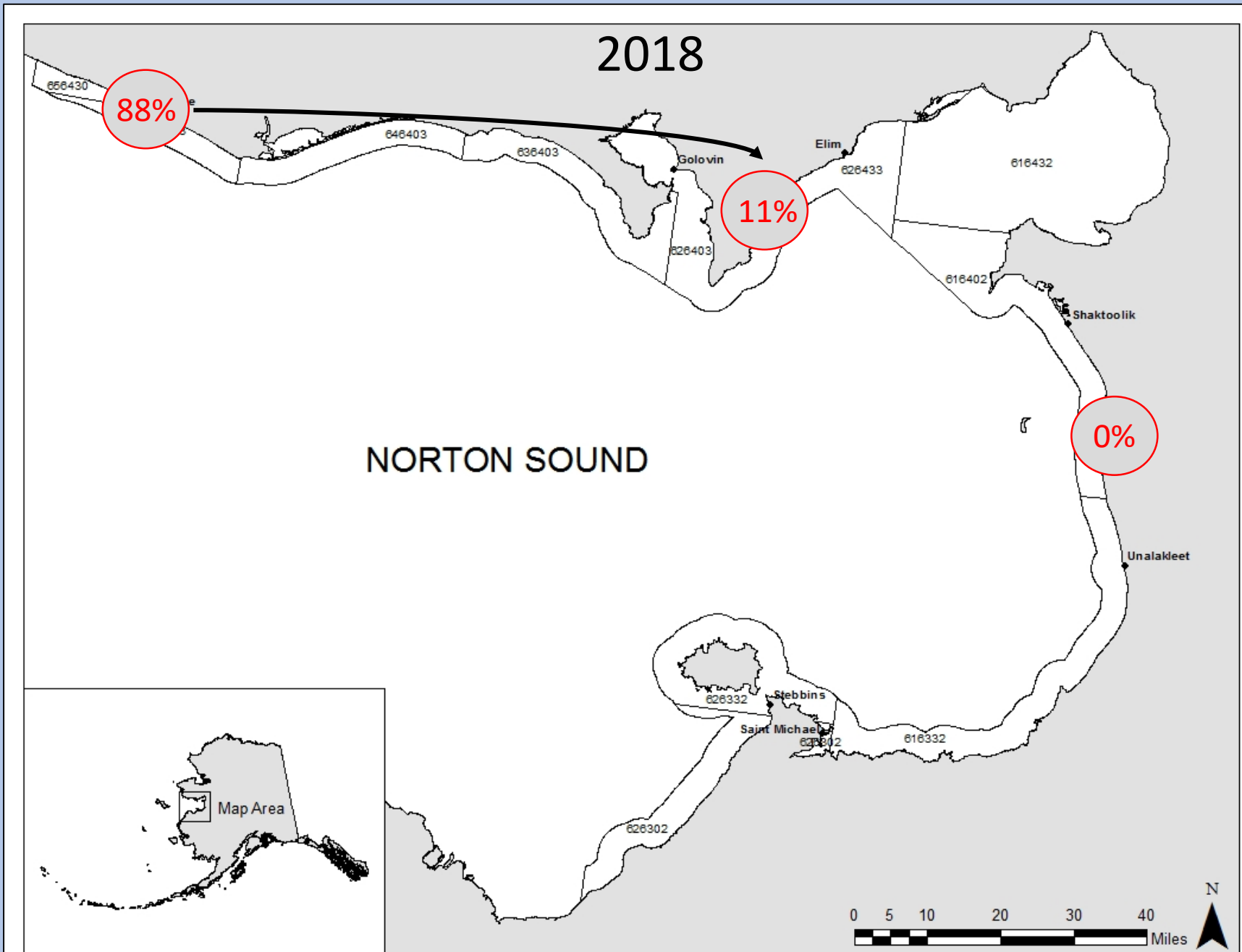
Assistant Area Manager



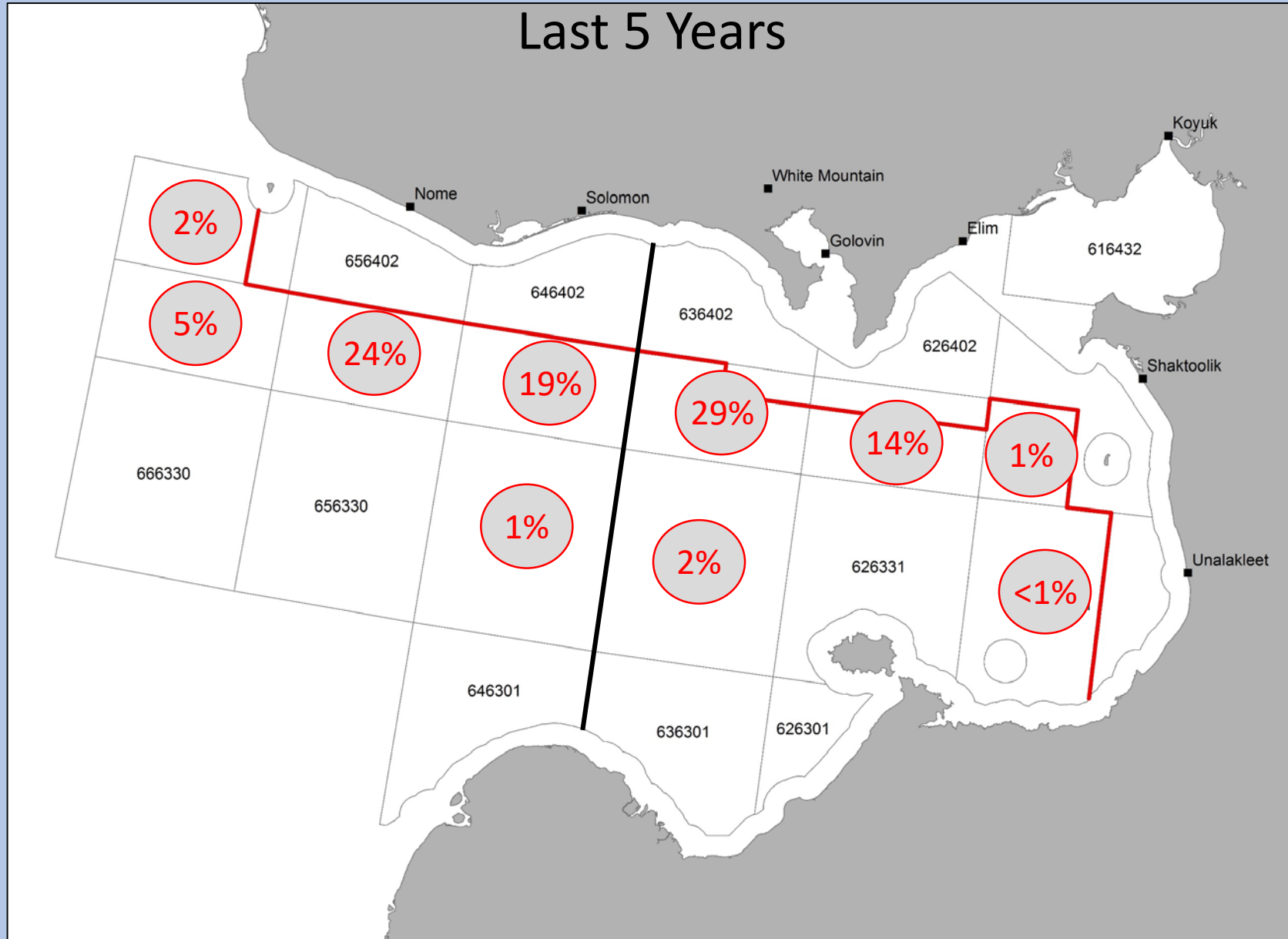
WINTER COMMERCIAL FISHERY OVERVIEW



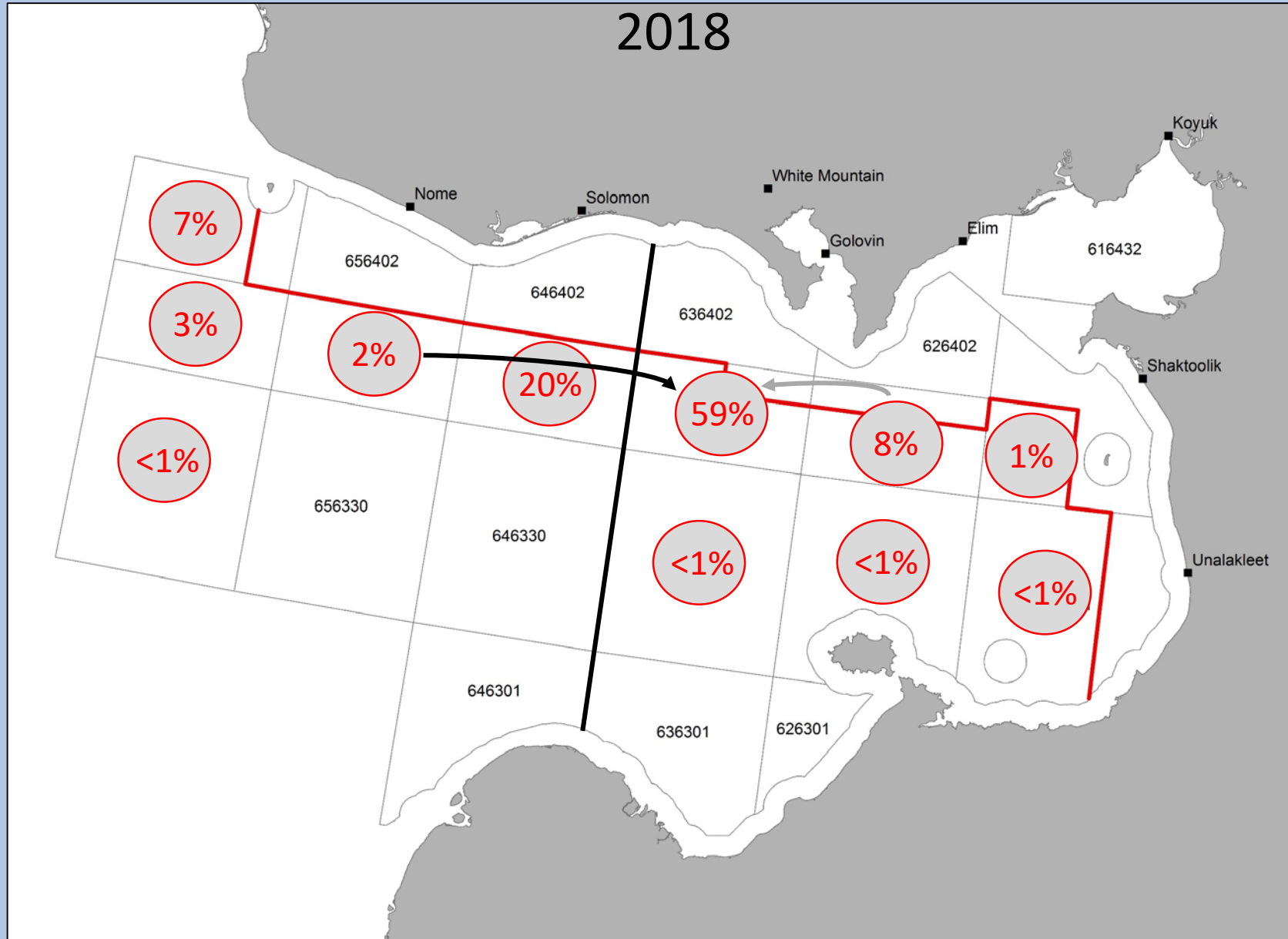
WINTER COMMERCIAL FISHERY OVERVIEW



SUMMER COMMERCIAL FISHERY OVERVIEW



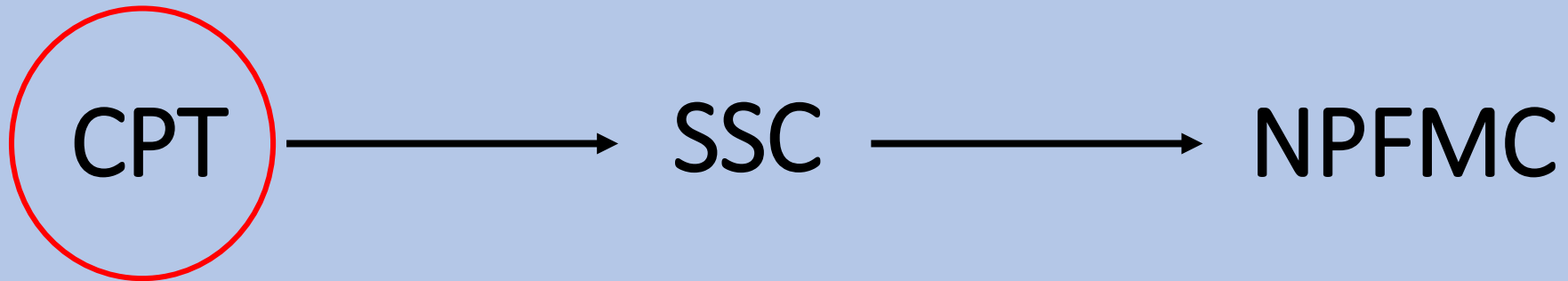
SUMMER COMMERCIAL FISHERY OVERVIEW



Quota Determination

Five-Tier System

- Based on stock information and model parameter choices
 - Recommended by CPT to SSC
 - SSC recommends tier, stock assessment, & model structure to NPFMC



Quota Determination

Five-Tier System

Most information



Least information

Tier	1	2	3	4	5
Stock productive capacity	Yes	Yes	Yes	Yes	No
at MSY	Yes	Yes	35%	Proxy	No
Instantaneous fishing mortality	Yes	Yes	Yes	No	No
at MSY	Yes, proxy	Yes	35%	No	No
Idea of natural mortality	Yes	Yes	Yes	Yes, proxy	No

Quota Determination

Norton Sound Red King Crab

- Current model uses data from:
 - Summer trawl survey
 - Winter pot survey
 - Summer commercial fishery
 - Winter commercial fishery
 - Subsistence fisheries
 - Tag recovery program
 - Observer program

Quota Determination

Norton Sound Red King Crab

- Summer trawl survey
 - Data collected
 - Abundance
 - Triennial from 1976–2002
 - Biennial from 2006–2010
 - Triennial from 2011–2017
 - Beginning 2018 trawl survey conducted annually
 - Length-shell composition since 2002



Quota Determination

Norton Sound Red King Crab

- Winter pot survey
 - Data collected
 - Length-shell composition collected
 - 1981–1987, 1989–1991, 1993, 1995–2000, 2002–2012



Quota Determination

Norton Sound Red King Crab

- Summer commercial fishery
 - Data collected
 - Retained catch, CPUE, & length-shell composition
 - 1977–1990, 1992–2018
 - Total catch
 - 2012–2018
 - Discards
 - 1987–1990, 1992, 1994, 2012–2018



Quota Determination

Norton Sound Red King Crab

- Winter commercial fishery
 - Data collected
 - Retained catch
 - 1978–2018
 - Retained catch length-shell composition
 - 2015–2018



Quota Determination

Norton Sound Red King Crab

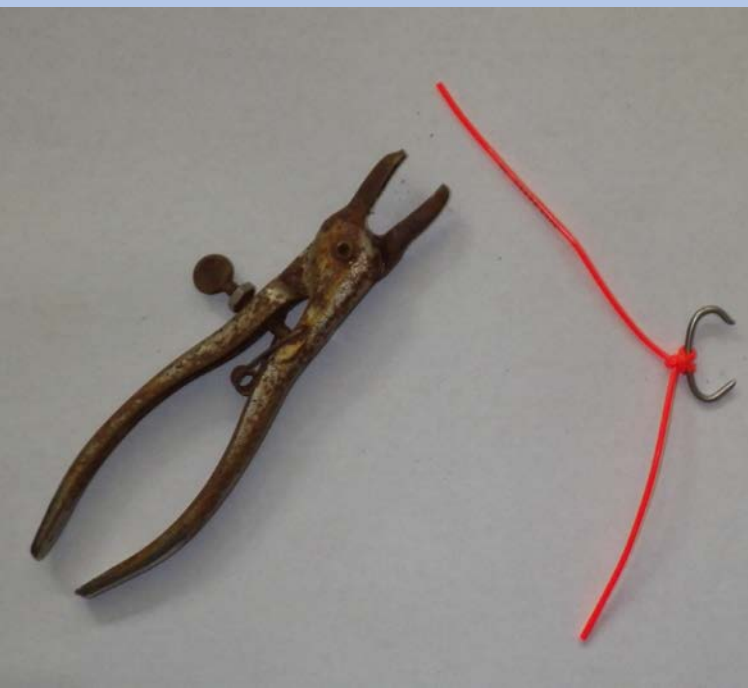
- Subsistence fisheries
 - Data collected
 - Total & retained catch
 - 1976–2018
 - Open year-round
 - Permits for winter and summer
 - 99 winter permits/year (10-yr avg.)
 - 17 summer permits/year (10-yr avg.)



Quota Determination

Norton Sound Red King Crab

- Tag recovery
 - Summer & Winter
 - Data collected
 - Biological & recovery location
 - 1980–2018



Quota Determination

Norton Sound Red King Crab

- Observer data
 - Summer
 - Data collected
 - Biological data & discard rate
 - 2012–2018
 - Winter
 - Data collected
 - Handling time & discard rate
 - 2016–2018



Knowledge Gaps

Norton Sound Red King Crab

- Natural mortality
- Spawner-recruit relationship
- Females
- Rearing grounds
- Stock portion inside closure line
- Tag recovery information
- Observer coverage

